

Research Article

**The Conference of Parties - 27 (COP-27) Agreement As an Instrument of State
Policy in Handling Deforestation:
A Comparative Study of Sweden and Indonesian Governments**

Muhammad Mutawalli^{1*}, Zainal Amin Ayub², Maskun³, Marthen Napang⁴

¹Faculty of Sharia and Law, Universitas Islam Negeri Alauddin Makassar, Indonesia

^{3,4} Faculty of Law, Universitas Hasanuddin, Indonesia

² School of Law, Universiti Utara Malaysia, Malaysia

*mutawallimuhammad22@gmail.com

ABSTRACT

The climate crisis is a threat to countries in the world. One of the factors causing the climate crisis is deforestation. Indonesia as the third largest tropical forest country in the world certainly has an impact on the world's climate. Indonesia is a victim of deforestation, moreover reforestation of forest land does not match the rate of deforestation. This research is a normative legal study, using comparative, conceptual, and regulatory approaches. This study discusses the implementation of the Conference of Parties - 27 (COP-27) agreement as the basis for establishing policy instruments in Indonesia in dealing with deforestation and looks at Sweden as a comparison in handling deforestation through a policy instrument scheme. This study found that Sweden, through its green politics concept, was able to control the harvesting and utilization of forest products effectively. COP-27 has environmental control principles, one of which is the global net zero principle, namely the earth's temperature is no more than 1.5 degrees. It is hoped that the principles in COP-27 will guide the Indonesian government in making legal policy instruments for environmental management, especially handling deforestation. This research suggests that, like Sweden's green politics, Indonesia needs to present strategic policies through the Green Environmentally Concept policy through policy instruments, be it through laws and regulations, government regulations, or presidential regulations to the level of regional regulations.

Keywords: Cop-27; State Policy Instrument; Deforestation.

A. INTRODUCTION

Human life is very dependent on the situation of nature and the environment and the world's climate. Human existence is part of nature itself, and where humans are subjects who play an important role in environmental sustainability. One of the aspects that affect climate change is unstoppable human activity in land use, both from personal consumption, groups and even too much larger commodities, namely economic activities

within a country.

Environmental crises that often occur are strongly influenced by the human perspective and paradigm in viewing nature itself. This perspective positions nature only as an object of fulfilling human life so this makes humans exploitative towards nature without caring about the consequences it causes. Therefore, improvements must concern improvements to human perspectives and behavior in interacting both with

nature and with other humans (Keraf, 2010).

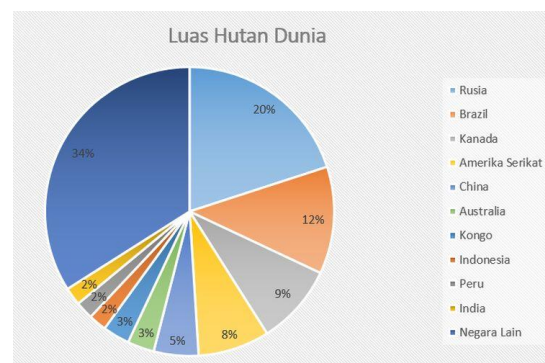
Deforestation is one of the four main aspects affecting world climate change in the last four to five decades. Deforestation is one of the biggest world issues for all countries today. This happens because apart from being one of the main causes of global warming, deforestation can also have a direct impact on the life of creatures on earth without exception (Yakin, 2015).

Tropical deforestation, illegal logging, and other illegal logging activities are the largest sources of carbon emissions (Naime et.al, 2022). Agricultural, forestry, and other land use activities cause loss of biodiversity (Gibson et.al, 2011), flora and fauna and threaten the lives and livelihoods of local communities (Angelsen et.al, 2014). Deforestation is a condition where forest area has decreased due to land conventions for infrastructure, settlements, agriculture, mining, and plantations.

Forestry land management can be interpreted as a process that determines changes in forest areas from time to time that changes forests into other lands, either through conversion caused by humans (especially to agriculture and settlements). Other things that happen outside of forestry land management are caused by natural disasters, such as volcanic eruptions, earthquakes, or floods. But disasters also sometimes occur as a result of human actions themselves. The occurrence of violations in the field of forest management will automatically result in forest degradation. Forest degradation is the

reduced capacity of forests to provide goods and services. The reduced function of forests will have a broad impact on the lives of the world's people. All living things are threatened by the loss of water and soil resources (Forest Resources Assessment Working Paper, 2015).

With so many implications for the impact of environmental damage caused by deforestation and forest degradation, it causes global impacts, in this case, the world's climate crisis. Developed countries and developing countries agreed to enter into a joint agreement in creating new directions and ethics in environmental management.



The graph above shows that Indonesia is one of the countries that has the largest total area of forest land in the world, contributing a total of 2 percent of forest land. This makes Indonesia one of the countries that can have an impact on world climate change today. Changes in forest land to non-forest land cause global warming due to frequent forest fires. There are violations and weaknesses in government policies on forest management, resulting in rampant logging or illegal logging which threatens all living things which are generally caused by forest fires that

have an impact on global warming.

The occurrence of forest degradation caused by state forest management has resulted in climate change and has become an environmental issue that has attracted the attention of many parties in the last four decades and is predicted to continue to be a topic of discussion in the future due to its complexity. Forest destruction with its various biophysical components is considered to contribute to increasing global warming (Global Warming) which is a variant of climate change. Global warming is believed to have some negative impacts that endanger human life (Siswoko, 2008).

Indonesia is one of the top five countries in the world that has lost large areas of forest over the last two decades. According to data from Global Forest Watch, Indonesia lost 9.75 million hectares of primary forest between 2002 and 2020. Reflecting on the high activity of illegal logging of rainforests and tropical forests as well as massive land clearing in Indonesia, it is of particular concern to the world.

This is caused by the implementation of regulations that have not been accompanied by enforcement regulations and violations of acts of deforestation. The Weak enforcement and the lack of concrete regulations regarding forestry land management are weaknesses and empty spaces internally for the Indonesian government. the large market demand resulted in domestic trade politics becoming unavoidable.

The need for state involvement and consistency is considered very important in addressing deforestation in Indonesia through solutive government policy instruments. Starting from this problem, The COP-27 (Conference of the Parties) held in Egypt was seen as present as a long-term resolution of an agreement to provide a solution to deforestation that has occurred in several countries, especially in Indonesia which has the largest population of rainforests and tropical forests in the world.

COP-27 is also considered a step by high-ranking state officials which is a new hope for repairing world climate damage which is a continuation of the previous COPs, especially the continued resolution of the implementation of the Paris Agreement (COP-21) in the COP-26 Glasgow agreement in 2021 ago.

The Ministry of Environment stated that since 2015 the number of deforestation activities on Indonesian forest land has decreased. However, it should be emphasized that deforestation activities by exploiting forestry land in Indonesia are still occurring, meaning that the reduced number of deforestation activities in Indonesia does not mean that deforestation activities do not occur, furthermore the forest and land rehabilitation carried out is not in accordance with the deforestation rate of existing forest land use (Susetyo, 2021).

From the historical aspect, after declaring that former President Suharto was stepping down from power, the tap for decentralization and

demobilization opened very rapidly. The government transition at that time from the administrative aspect also paved the way for the emergence of regional authorities or regional governments which also transferred environmental and land use management policies to local governments (Cisneros, Kis-Katos, & Nuryartono, 2021). This has an impact on the size of forestry land use activities on licenses granted illegally.

It is important too for the Indonesian government to ratify all the results of the decisions and agreements of the Conference of the Parties (COP) into government policy instruments, both at the central and regional levels by comprehensively harmonizing relevant regulations as an effort to reduce the rate of deforestation and prioritize massive reforestation or land rehabilitation.

The existence of the Conference of the Parties in dealing with the impact of the world's climate crisis is a necessity for every country in making a flow of handling to achieve global net zero, especially in Indonesia. The impacts are potential and have wide-ranging implications, including natural resource, economic, environmental sustainability, and country development. The issue of deforestation needs to be addressed by designing future policies to achieve the goals of COP-27.

This study is focused on discussing how the decisions in COP-27 can be converted into legal instruments and national policies to respond to the potential for greater climate damage to the country and world life. Then this study analyzes the policy

model implemented by Sweden by adopting the COP achievement principles as the objectives of the policy.

Responding to the potential risks from deforestation to climate damage, this study will recommend several legal solutions and concrete actions that will be useful for countries in managing deforestation rates.

When conducting and compiling this research, the authors found several scientific publications that had relationships and correlations with the issues raised by the authors, but the existing articles had very different viewpoints and discussions. The first research was conducted by Luca Tacconi, Rafael J. Rodrigues, and Ahmad Maryudi in 2019. This research discussed the enforcement of deforestation laws between Indonesia and Brazil which suggested that Indonesia should be able to adopt the law enforcement mechanisms carried out by Brazil (Tacconi, Rodrigues, & Maryudi, 2019)

Second, research from Alemayehu Oljirra discusses the causes, consequences, and solutions of deforestation in Ethiopia. This research suggests that one of the methods used to protect trees from deforestation is to designate certain areas where trees can be cut and used and other areas where trees are protected by law (Oljirra, 2019).

The third research is from Anggraeni Arif, which discusses the legal review of deforestation and forest degradation on the environment. In this

study it is said that Indonesia is listed as one of the countries that has the highest rate of environmental destruction in the world. However, through public awareness of the impact of forest destruction, it can minimize the rate of deforestation in Indonesia (Arif, 2016).

Furthermore, research conducted by Clearestha Nakita and Fatma Ulfatun Najicha discussed the effects of deforestation and efforts to preserve forests in Indonesia. The results of this study suggest that the high development of the plantation sector is the main cause of deforestation, as an effort to preserve forests, the government needs to involve the community directly from the perspective of utilization to supervision and law enforcement (Nakita, & Ulfatun, 2022).

The fifth research which is also related to our research is research written by Brian J. Preston which discusses the influence of the Paris Agreement on the Litigation Climate from both the Corporate Governance and Catalyst aspects. This research also describes the Paris agreement that affects legal responsibility where it is necessary to develop sustainable aspects of climate law (Preston, 2020).

Based on the description and facts mentioned above, in this study, the writer wanted to conduct a study entitled: "Cop-27 As an Instrument of State Policy in Handling Deforestation: A Comparative Study of Sweden and Indonesia Governments".

B. RESEARCH METHODS

The author uses the United Nations conference approach through the Conference of Parties (COP) and other related regulations (especially international instruments such as conventions) to describe and understand the impact of deforestation on the climate crisis that affects most countries in the world. The author also applies a conceptual approach related to handling deforestation through a policy scheme with the Green Environmentally Concept policy concept. In addition, the authors also use secondary source data such as legal writings that have been interpreted as primary sources, including books, scientific papers, working papers, and journals which can be accessed online.

C. RESULTS AND DISCUSSION

1. Deforestation, Between State Needs or State Disasters

a. Deforestation as a State Need

Indonesia as one of the ten largest countries with the largest forest land in the world cannot avoid using and exploiting forest land to be used as plantation lands. More than half of Indonesia's territory is forest, making it the eighth country with the largest forest in the world in 2020. Indonesia has 97 million hectares of forest land and contributes two percent of the total forest area in the world (Kompas, 2022).

Land clearing aimed at creating the country's economic wheels in the agricultural aspect is considered to be an unavoidable will of

the state. The state, in this case, the government, also really needs to promote economic circulation both conventionally and internationally through cooperative relations between countries. The high demand from other countries for Indonesia which is related to wood consumption has an impact on state revenues. Even this is supported by the availability of existing raw materials in production activities. It is known that several things make the forestry sector a source of income for the country's economy, including, human needs for food, mining, energy, and housing for the population.

Wood has an important role as one of the needs of human life in carrying out daily life. Wood is processed and used as a material for making houses, furniture, and even wood in the form of logs that are traded. Along with its development, consistent and sustainable use of wood is carried out by making forest management efforts. Of course, this business requires a permit from the government, namely a business permit for the exploitation of Timber forest product utilization business (Usaha Pemanfaatan Hasil Hutan Kayu/UPHHK).

Apart from using wood to make various kinds of furniture, waste is also used to make particle boards. Particle board is a product that comes from wood waste added to other products such as glue to glue. Products from particle board are also like tables and chairs. The Utilization of wood waste is considered very effective in reducing wood waste used in making furniture. By

converting wood into various kinds of products, it can improve the community's economy, especially financially.

The next economic activity in the forestry sector is the utilization of forest services. The Utilization of this service is not oriented towards taking forest products but rather on using the forest services that are already available in it. The Utilization of this service is applied by creating a tourism site or recreation area in a forest area without destroying the forest area. Utilization of forest services is very effective in developing the economy of the community around the forest area.

In addition, the use of this service can also be done by creating a hunting park in the forest area. Hunting parks are usually filled with game populations such as antelope and deer. These animals will be hunted if they have experienced overpopulation. Hunting activities are now starting to become a recreational trend.

Deforestation activities are considered to be the will of the state in fulfilling the needs of the country's economy in the aspect of fulfilling them, including large-scale plantations, the logging industry, opening lanes/roads, mining, settlement expansion, and the fishing industry through a scheme for removing mangrove land for the construction of ponds.

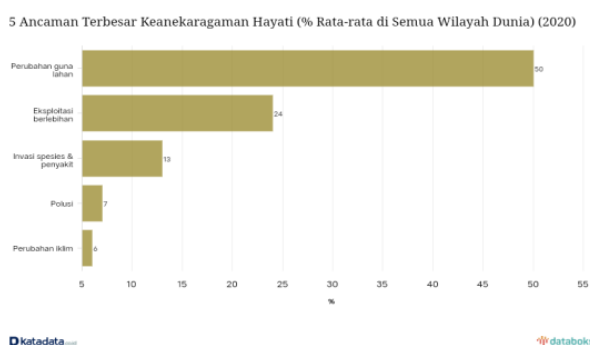
b. Deforestation: State Disaster Due to Poor Management

The high demand for forest resources tends to increase. Forest sustainability is

threatened by disturbances caused by the conversion of forests into non-forest areas, especially agricultural and plantation businesses because of the increasing population and their needs. Land use for economic activities has disrupted forest security in the form of encroachment, illegal logging, forest and land fires, and illegal trade in wild plants and animals.

In the course of the development of the timber industry, there has been a large increase in the amount and rate of loss of forest cover in Indonesia. On the other hand, forests are still positioned as a resource for economic development which is feared will accelerate the rate of deforestation. Deforestation is a change in land cover conditions from the Forest or Forest Category land cover class to the Non-Forest or non-forest Category land cover class (Kementerian Lingkungan Hidup dan Kehutanan, 2021)

Reporting from the WWF (World Wildlife Fund) report regarding the discussion of the LPR (Living Planet Report) in 2020, explained that the five biggest threats are currently plaguing the world. This threat also has implications for the destruction of biodiversity in the world.



Based on the chart, shows that human activity in the field of conversion of forestry land use is one of the biggest causes of world climate change. This is based on the level of demand and land use, be it space, wood, or other forest products. Excessive exploitation of forest land also has an impact on biodiversity, both animal species and other plant species.

The use of forest contents and land produces a high economy, but this starts with irresponsible use in the long term which causes bad results. Like Kalimantan, which used to have extensive forests because forest use practices resulted in a reduction in the area of forest cover far from before. This has a long impact and is not a simple problem that can be solved in a short time. The problem that arises is that many industries use wood as a basic raw material, causing an increasing area of forest land to be cut down and over-exploited.

Reducing the number of forests causes the extinction of certain species and of course, this is not what we expect. Deforestation contributes to global climate warming which cannot be ignored. Forest destruction accounts for 20% of gas emissions every year. This percentage has not been added by emissions from motor vehicles, industry, and fires.

Indrarto mentioned factors contributing to the accelerated rate of forest destruction and forest degradation including; (1). The interests of economic development; (2). Community dependence on natural resources; (3). Population

growth and its effects; (4). High demand for wood supply and wood production; (5). High demand for plantation and mining prices and commodities; (6). Unclear land ownership; (7). Political interests; (8). Poor governance and management of forest resources (Indrarto et.al, 2013).

This is exacerbated by the low level of public awareness and monitoring and enforcement of rules against deforestation violations that have not been regulated concretely.

2. Conference of the Parties (COP-27) As Hope and Sustainability

a. The concept of COP-27 as an extension of COP-26 and the Paris Agreement (COP-21)

The Conference of the Parties (COP) is a convention regulatory body that advances convention implementation through decisions taken at regular meetings and has the responsibility to monitor and review the implementation of the United Nations Framework Convention on Climate Change issues. The main task of the COP is to review the emission inventories submitted by the member parties (Parties). Based on the convention, the COP assesses the impact of the steps that have been taken and the progress made by countries in achieving the objectives of the Convention. The first COP meeting was held in 1995, with the priority issues most frequently raised including activation of carbon markets, transparent reporting of program follow-up regulations (transparent reporting), emission reduction

commitments, prevention and anticipation of loss and damage,

From 31 October to 12 November 2021 in Glasgow, Scotland, the Ministry of Finance together with other stakeholders attended an important meeting related to global efforts to mitigate and overcome the impacts of climate change, namely the 26th Conference of the Parties (COP26) United Nations Framework Convention on Climate Change (UNFCCC).

COP26 is a very important meeting because it is the first high-level meeting to evaluate the progress that has been made since the Paris Agreement was adopted in 2016 when 191 countries had to set even more ambitious targets regarding their contribution to climate change action under the Paris Agreement. COP26 is a big hope for many parties, including the Minister of Finance, and multilateral financial institutions, in achieving commitments regarding emission reductions (Perbina, Jeremie, Pasaribu, 2022).

Loss and damage from climate impacts are already an existential threat today, and this is especially the case for the loss of life and damage to health, well-being, and livelihoods that many vulnerable countries and people suffer. In line with this, at the COP-26 event in Glasgow last year, there were still many COP-participating countries that had not fully ratified the COP agreement. Moreover, in the implementation of COP-26, the main discussion focused on the actual implementation of the Paris Agreement

(COP-21), which until today has not met a bright spot in its implementation.

Climate damage is a shared responsibility of every state government. The impacts and losses experienced by the people of the country must be a concern of the government to prepare strategic steps to avoid the direct impact of climate damage. At COP26, governments in each country need to recognize and address the fact that there will be many countries and people who will have a direct impact on climate damage, and each country is asked to explain the steps taken about the 2030 emission reduction target so that it can stay in line with the net zero targets in the next half century (Climate Change, 2021a).

b. COP-27 Principles as a Sustainability of COP-26 Glasgow

With a commitment to stop everything that deals with damage and loss in aspects of environmental change, the 26th Conference of the Parties outlines four achievements as well as principles towards improvement as well as the next COP-27 program in Egypt. The achievements and principles include:

1) Mitigation: Global Net Zero (Net Zero Deforestation)

According to the IPCC special report (Climate Change, 2021b:7) related to the effects of warming stated the catastrophic consequences that caused global warming to exceed the target of 1.5 degrees set out in the Paris Agreement. The warming of the Earth at a rate between 1.5 and 2 degrees is fatal for the survival of living

things and the universe, for example, an imbalance in the environment, fragile ecosystems such as loss of coral reefs, and extinction of animals because they are unable to adapt to extreme environments. Thus, it demands an improvement in policies and effective actions to prevent increased emissions in the future.

2) National Determined Contributions (NDCs')

NDC embodies the efforts of each country to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement (Article 4, paragraph 2) obliges each Party to prepare, communicate and maintain the successive nationally determined contribution (NDC) it seeks to achieve. The Parties are obliged to pursue domestic mitigation measures, to achieve the objectives of the contribution.

3) International Collaborations on Climate Change

The Conference agreed on the Glasgow work program for the next 10 years regarding Action for Climate Empowerment (ACE), with a concentration on steps to advance climate education, training, public awareness, public participation, public access to information, and international cooperation. Furthermore, collaboration emphasized in this program is the participation of youth as critical agents of change, therefore the government is encouraged to recruit the nation's sons to be part of the national delegation as a determining factor for the safety of this planet in the future. Paris Agreement Implementation

Implementation of the Paris Agreement through the agreement and application of three main parts of Article 6, including voluntary cooperation, new carbon credit mechanisms, and non-market approaches. In those passages, consensus was finally found on key political issues that had divided sides for years: how to avoid double-counting emission reductions; use of Clean Development Mechanism (CDM) credits; and adaptation finance.

4) Loss and Damage in Deforestation

Loss and damage refer to the impacts of climate change that occur beyond the ability of people and ecosystems to adapt. It is widely expected that COP26 will have a significant focus on how humanity responds to these growing impacts causing loss and damage to millions of people, including loss of life, livelihoods, and ecosystems. This has been a contentious issue in recent years, not least given the widely differing views on accountability and compensation for climate change impacts. Support and measures to prevent, minimize, and overcome loss and damage are part of international assistance under adaptation, disaster prevention, disaster preparedness, disaster response, and rehabilitation budgets.

c. Negotiation Issues in COP-27 and Policy Program

The Conference of Parties 27 is aimed at completing the "Paris Rulebook" and Implementation of the COP-26 Resolution, which are the rules needed to implement the 2015 Paris

Agreement, then to resolve the extraordinary issues of COP-25 Madrid. Thus, the issues at this conference include the following:

- 1) Enabling ambition through carbon markets;
- 2) Rules for transparent reporting of actions and support;
- 3) The General time frame for emission reduction commitments;
- 4) Enabling enhanced adaptation measures;
- 5) Prevent, minimize, and overcome loss and damage;
- 6) Means of implementation, including the initiation of discussions on new goals for global climate finance after 2025;
- 7) Responding to the latest science and ambitions of current emission reduction targets;
- 8) Promote fair and inclusive climate action.

This is also related to the previous COP's criticism that it was unable to take sufficient decisions and actions, resulting in delays in the program. The holding of COP-27 is a follow-up to the previous COP-COP, specifically COP-21 (Paris Agreement) and COP-26 Glasgow, taking into account all the criticisms and strong warnings from the IPCC (Intergovernmental Panel on Climate Change), COP-27 was implemented with captures the desire of many parties to fully embed science in the decision-making process. For example, in this case, COP-27 demonstrated its action through the application of adequate science to fulfill the goals of the Paris Agreement.

3. Implementation of the COP-27 As State Policy Instrument in Handling Deforestation

a. Implementation of COP-27 in International Policy Instruments

1) Net Emission Target and 1.5 Degree Temperature in 2030-2060

As is well known, it is generally known that the electricity sector contributes a quarter of greenhouse gas emissions, but other facts say that coal is the single largest contributor to human-created climate change. The COP-26 policy calls for concrete steps that countries must take, such as ending international coal financing by the end of 2021; funded more than \$20 billion in new public finance and philanthropy to encourage developing countries to increase clean energy and make the transition away from coal.

2) Adaptation to The Protection of Community and Natural Habitat

Communities are part of the natural environment and together they work to re-arrange the balance of nature. The natural resources available to humans, the weather conditions they pass through, and other environmental features all have a major impact on the way human life works in all aspects of life, whether economic, socio-cultural, health, security, politics, education, and others.

According to Stokey, the main factor for environmental damage is the depletion of non-renewable natural resources. The sustainable use of natural resources is essential not only for

environmental protection but also for the existence of life. Human relations with culture and atmosphere recognize the need for sustainable development. The notion of development is no longer limited to communal and commercial progress, above all it must look at economic growth and progress by considering sustainability. However, the assertion that good societal progress is necessary to have a beneficial effect on the environment seems ambiguous (Lei et.al, 2022).

Climate changes dramatically over time and will continue to change even as all of humanity seeks to reduce emissions. COP-26 requires the collaboration of all parties in activating and supporting countries affected by climate change to protect and restore ecosystems to build defenses, warning systems, and resilient infrastructure, and agriculture to avoid loss of homes, livelihoods, and even lives.

3) Mobilization of Developed Countries Financial Assistance to Developing Countries

The whole world needs to make massive investments to avert and prevent the severity of the emissions and the great damage to human civilization and the universe. So of course countries need trillions of dollars to implement COP26 programs, such as including increased and more accessible public finance for the most vulnerable and enhanced public-private models for mobilization and policy change to create conditions for all investments to be consistent with the Agreement Paris. COP-26 crystallized a vision

to transform billions of public finance into trillions of needed low-carbon and resilient investments.

Below is the mobilization of developed country funding to developing countries (Hill, 2022):

- a) Increase the \$100 billion target for COP26 policy programs.
- b) Agreement by all developed countries to collectively double the 2019 level of adaptation finance by 2025; the first specific global financing objective of adaptation.
- c) More than \$350 million have been allocated to the UNFCCC adaptation fund, nearly three times the previous highest collective mobilization rate. More than \$400 million was pledged to the Fund for the Least Developed Countries, the highest collective mobilization the fund has ever seen. This record-breaking contribution builds resilience in vulnerable communities, safeguarding livelihoods and livelihoods.
- d) UK, France, Germany, US, and EU launch groundbreaking \$8.5 billion JETP with South Africa. JETP is an innovative country-led partnership that aligns coordinated international support with countries' plans for a sustainable and equitable energy transition.

b. Implementation of COP-26 in Swedish Government Policy

Geographically, Sweden is a country of trees. More than 70% of Sweden's landscape area is covered by forest. it should be understood that Sweden is also not a country free from

deforestation. Sweden is also a country where logging is big business. Sweden owns less than 1% of the world's commercial forest area and provides 10% of sawn wood, pulp, and paper traded on global markets.

The high consumption of processed wood since 1940 has caused Sweden to be in a deforestation emergency position. with good management and carrying out the principles of sustainable environmental governance and with its current green politics scheme and in less than 100 years, Sweden's forest assets are back and even doubling. Sweden now has more forests than a century ago when there were only a fraction of its current population and globalization was absent (Gray, 2018). Forest management is very important in Sweden, considering that 60% of the land area is forest land.

Forest management is very important in Sweden, taking into account that 60% of the land area is forest land, and the amount of exports of pulp, paper, and wood logs accounts for 12% of national income and creates jobs for 100,000 people (Johansson, & Lidestav, 2011). The Swedish forestry industry is also able to take advantage of renewable resources so that wood processing is free of fossil fuels, and there are even industries that focus on paper recycling (Perkim.id, 2021).

Sweden is an advanced country in forest management. Every year they can produce between 85 million and 90 million m3 of wood, but their forest area never decreases. In Sweden, the

community is the majority owner of the forest, the government controls only three percent. Swedish private parties and individuals also receive subsidies from the government because this is guaranteed in the law. The objectives of forest management funding are to increase forest growth, maintain networks for forestry purposes, ensure forest biodiversity, and encourage forest adaptation to climate change. All the steps taken by Sweden and Finland, as well as the positive fruits they are enjoying now, are a long process. Not at all an instant result.

Sweden's economy is underpinned by export-oriented timber, hydropower, and iron ore. These three resources form the resource base of Sweden's foreign trade. Sweden's main industries include motor vehicles, telecommunications, pharmaceuticals, industrial machinery, precision equipment, chemicals, household goods, forestry, iron and steel. In the modern agricultural industry, Sweden employs more than half of the domestic workforce, currently, Sweden is further developing internationally competitive engineering, mining, steel, and sawdust industries, as evidenced by companies such as Ericsson, ASEA/ABB, SKF, Alfa Laval, AGA, and Dyno Nobel (Carlgren, 2015).

The Swedish economy is financed through a relatively high-income tax which ensures that income is distributed throughout society, an economic model such as this is called the Nordic model (Cronin, Ross, & Shoch 2012). About 90% of all resources and enterprises are privately held,

with a minority of 5% owned by the state and the other 5% operating as either consumer or producer cooperatives (Bruhn, Kjellberg, & Sandberg, 2013)

Sweden believes that active and sustainable forestry can play an important role in contributing to climate change mitigation by substituting fossil fuels and increasing the long-term storage of carbon in forest lands while meeting relevant national environmental quality objectives. Sufficient sustainable availability of biomass from Sweden's forests along with sustainable profitability and the ability to invest throughout the forest value chain will be ensured through sustainable forest management and forest growth and within Sweden's framework of environmental quality objectives (Johannsen et.al, 2019).

Sweden has so far implemented the COP principles very well. This is evidenced by all the policies of the Swedish government towards environmental management reflected by ratifying the Paris Agreement and by implementing the fossil fuel-free program. Sweden applies the Paris Agreement principle to its green politics program as a form of revolutionary policy in the field of environmental management, especially in the management of their forest land. Green Politics is a political ideology that aims to create an ecologically sustainable society that is rooted in concern for the environment, social justice, and democratic life which is built from the behavior and culture of each individual.

The legislation that forms the basis of the concept of green politics and Sweden's actions to promote environmentally friendly technologies is called "The Swedish Environmental Code". This law aims to promote sustainable development and safeguard human health and the environment in the future. The Swedish Environmental Code is the basic rule that was ratified on January 1, 1999. This law acts as a key for the Swedish state both in terms of management concept and practice. In Swedish sustainable development practice, because previous environmental laws were not sufficient to address the environmental problems that occurred, so that the presence of the main idea of "The Swedish Environmental Code" is to renew environmental policy into practice.

The Swedish government officially announced that their country would be one of the first countries to be free from fossil energy by creating a Fuel-Fossil-Free program. The Swedish government will increase assistance in developing solar and wind power as energy sources, increasing energy storage capacity, and developing environmentally friendly transport. Sweden plans to reduce its emissions by 40 percent by 2020 and the Fossil-Fuel-Free program itself is expected to be fully operational by 2050 (Hirtenstein, 2015).

Sweden also applies a certification system policy in building construction. Miljöbyggnad is a pilot area for a certification system in building construction for both newly built and already built

buildings. This system is based on Swedish building regulations, government regulations, and Swedish building practices. This certification system pressures building developers to use environmentally friendly materials and not use plastic and steel to build buildings, not only are the building materials environmentally friendly, but the energy source of the building is also environmentally friendly, namely using solar panels as an energy source (Sweden Green Building Council, 2022).

c. Ratification of COP-27 As a Policy Instrument of the Indonesian Government

One of the efforts in managing forestry land in Indonesia is the existence of Greenpeace, Greenpeace has made various forms of efforts to respond to and deal with violations in forest management committed by Wilmar. Greenpeace conducted lobbying with policymakers such as Consumer Brands, and the European Union, and held discussions regarding this issue with Wilmar, Unilever, and Mondelez. Forest and land fires can be found in collaboration with the affected village Community (Aryadi, Satriadi, & Syam'ani, 2018).

Several research results prove that cooperation between government agencies both between domestic institutions and between Indonesia and other countries has a very good impact on controlling or at least reducing deforestation in Indonesia (Santoso, Ratnawati, & Riyanti, 2022).

Indonesia already has several policies that generally reflect COP principles, these policies

include:

1) Illegal logging Handling Policy, through the Timber Legality Assurance System (SVLK), which is a system that guarantees the sustainability of forest management and/or timber legality as well as timber traceability through certification of assessment of Sustainable Production Forest Management (PHPL), Timber Legality certification (S-LK), and Supplier Declaration of Conformity (DKP). The Indonesian government through the Minister of Forestry in June 2009 issued Minister of Forestry Regulation No. P.38/Men-hut-II/2009 concerning Standards and Guidelines for Performance Assessment of Sustainable Production Forest Management and Verification of Timber Legality in Permit Holders or Private Forests (Rahanti, Windiani, & Wahyudi 2016). However, it has been amended into Regulation of the Minister of Forestry No.P.43/2014 which aims to improve the quality of implementation and implementation of sustainable production forest management and timber legality.

2) Forest Law Enforcement Governance and Trade (FLEGT), is a policy initiated by the European Union to help timber-producing countries improve their governance and capacity building in combating Illegal Logging. FLEGT also aims to minimize activities against illegal timber consumption and prevent the entry of illegal wood products into the European Union (Hawin, Nurhayati, & Antoni. 2010).

Forest utilization and its protection have also been regulated in several provisions,

including:

- a. the 1945 Constitution of the Republic of Indonesia;
- b. Law Number 41 of 1999 concerning Forestry;
- c. PERPU Number 1 of 2004 concerning Amendments to Law Number 41 concerning Forestry,
- d. Law Number 19 of 2014 concerning the Stipulation of PERPU Number 1 of 2004 concerning Amendment to Law Number 41 concerning Forestry to Become a Law;
- e. Law Number 18 of 2003 concerning Prevention and Eradication of Forest Destruction;
- f. Law Number 32 of 2009 concerning Environmental Protection and Management.

Furthermore, in Law Number 18 of 2013 concerning Prevention and Eradication of Forest Destruction it is also explained that the use and use of forest areas must be carried out appropriately and sustainably by taking into account ecological, social, and economic functions and maintaining sustainability for the present life and the lives of future generations. Where the efforts to prevent and eradicate forest destruction are based on the following principles:

- (1) Justice and legal certainty;
- (2) Sustainability;
- (3) State responsibility;
- (4) Community participation;
- (5) Accountability;
- (6) Priority; And

(7) Integration and coordination

Meanwhile, Article 3 of Law Number 18 of 2013 concerning the Prevention and Eradication of Forest Destruction, states that the prevention and eradication of forest destruction aim to (1) guarantee legal certainty and provide a deterrent effect for perpetrators of forest destruction; (2) sustainably ensure the existence of forests while maintaining sustainability and not damaging the environment and surrounding ecosystems; (3) optimizing the management and utilization of forest products by taking into account the balance of forest functions to create a prosperous society; and (4) increasing the capacity and coordination of law enforcement officials and related parties in handling the prevention and eradication of forest destruction.

Of course the legal provisions above support the existence of the COP-26 program related to loss and damage to deforestation, as in the regulation above which emphasizes eradicating forest destruction through providing guarantees of legal certainty and a deterrent effect for perpetrators of forest destruction crimes.

In addition, Law Number 32 of 2009 concerning the protection and management of the environment clearly states that a decrease in the quality of the environment will threaten the survival of humans and other creatures, which in the end it is necessary to protect and manage the environment based on a strong commitment and consistently carried out by all parties (government, stakeholders, and civil society). This

shows that policies and regulations in Indonesia have supported the COP, which is based on:

- (1) State responsibility;
- (2) Sustainability and sustainability;
- (3) Harmony and balance;
- (4) Integration;
- (5) Benefits;
- (6) Caution;
- (7) Justice;
- (8) Ecoregions;
- (9) Biodiversity;
- (10) Polluters pay;
- (11) Participatory;
- (12) Local wisdom;
- (13) Good governance; And
- (14) Regional autonomy.

As is the case in the second goal of COP26 regarding Adaptation to the Protection of Communities and Natural Habitats, Law Number 32 of 2009 concerning Protection and Management of the Environment, Article 3 points to j have the same vision and mission of the COP-26 and COP-21 Conventions (Paris agreement) before. Article 3 of Law Number 32 of 2009 reads:

- a) Protecting the territory of the Unitary State of the Republic of Indonesia from environmental pollution and/or damage;
- b) Ensure safety, health, and human life;
- c) Ensuring the survival of living things and the preservation of ecosystems;
- d) Maintaining the preservation of environmental functions;
- e) Achieve environmental harmony, harmony,

- and balance;
- f) Ensure the fulfillment of justice for present and future generations;
 - g) Ensure the fulfillment and protection of the right to the environment as part of human rights;
 - h) Controlling the wise use of natural resources;
 - i) Realizing sustainable development; And
 - j) Anticipating global environmental issues.

The Paris Agreement says that developed countries have promised to give each other long-term loans. This loan will help these countries to continue to use energy in an environmentally safe way. Indonesia is trying to reduce the impact of climate change by planning for it and setting spending limits for various areas of government. In 2016-2019, the average amount spent by the government on climate change each year was IDR 86.7 trillion. And, the average amount that the government spends on climate change each year in the APBN is around 4.1% of the budget. Indonesia is using a carbon pricing tool to try to manage climate change. These tools include carbon taxes and carbon transactions.

Carbon tax provisions are contained in the Tax Harmonization Act, namely laws that make it easy for companies to pay their taxes. Implementing a cap-and-trade system to finance climate change would provide a favorable environment for funding development to help Indonesia achieve its national development goals. The market is already operational, and pilot projects are underway at State-Owned

Enterprises (BUMN) such as PLN, to create carbon markets. If Indonesia and other countries agree to set more ambitious climate goals, it will have a major impact on Indonesia's strategy and policies. Indonesia has signed an agreement to help reduce the amount of deforestation, energy use, and production of energy-efficient devices.

The President of Indonesia, Joko Widodo, has helped realize the target of zero deforestation by 2030. This means that all trees in Indonesia will be left standing, and we will not damage any of them. Indonesia and other countries have signed agreements to protect 85.5 percent of the world's forest area. President Jokowi has committed to stop using coal to generate electricity by 2040 (Lukmadi, & Sitabuana, 2022).

In the national context, controlling climate change is a constitutional mandate that everyone has the right to live in prosperity, physically and spiritually, to have a home, to have a good and healthy environment, and to receive health services. The state provides direction and is obligated to ensure that the development needed to meet the welfare of the people still pays attention to the protection of environmental and social aspects. With awareness of the threat from the negative impacts of climate change, control and management of climate change is not a burden for the State, but it is time to become a necessity. Thus the State's commitment to dealing with climate change is a national agenda.

If you look at the description above, in the form of existing rules, in principle the Indonesian

government in laws and regulations has accommodated the COP principles, but has not fully implemented them in the form of technical policies. To this day deforestation still occurs in several areas, even though the deforestation rate has decreased in the last 4 years, this number may increase again when deforestation activities continue.

The government's inconsistency has also not been seen in inward policy instruments which create national strategic programs in the field of environmental management, especially in terms of deforestation, Indonesia has not implemented COP principles concretely. Finally, it is known that the Indonesian government's national agenda of moving the new nation's capital to the island of Borneo has also created a new polemic in terms of forestry land management in Indonesia. However, this agenda is an alternative option for tackling other environmental impacts, namely a decrease in the volume of the DKI Jakarta province's land area, which currently is Jakarta's land area below the increasing sea volume.

The existing policies are in general like cooperation agreements between the Indonesian government and several European Union countries in environmental management. It's different from Sweden, which implements policies internally through its big plan, namely Green Politics, supported by concrete implementation through its policy instruments that can touch aspects of environmental management to all aspects, from taking to using well-organized

natural products so that Sweden can become a friendly country. The fifth largest environment in the world. This Green Politic also has an impact on almost all forms of agreements and international cooperation between Sweden and other countries in terms of handling the environment, especially the management of Swedish forest land.

In this case, Indonesia needs to present strategic policies through the policy concept of the Green Concept of Environmentally Friendly Management through policy instruments, whether through laws and regulations, government regulations, presidential regulations to the level, or regional regulations. Like Sweden's green politics plan, the Green Environmentally Concept (GEC) is also expected to become a new ethic in environmental management, both from the economic, administrative, and law enforcement aspects to the aspect of restoring and repairing environmental damage.

In the implementation of COP-27 in Egypt, there were decisions agreed upon by world leaders participating in COP-27 relating to the management of forestry land, including the following:

1. Implementation of the Global Climate Observing System, namely implementing a system of long-term and periodic observations of the Earth's climate conditions that are sustainable to be able to increase state governments' understanding of the global climate system and its changes, as well as

how to take action to adapt and carry out mitigation.

2. Funding arrangements for responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage, with increasing urgency increasing efforts to prevent, minimize and address the loss and damage associated with the adverse effects of climate change in connection with the ongoing global warming and its significant impact on vulnerable populations and the ecosystems on which they depend.
3. National Adaptation Plans, namely the need for the process of formulating and implementing national adaptation plans so that they become an inventory of information related to the achievements or progress made by each country in its policies for the global achievement of periodic adaptation to climate change. Through the Glasgow-Sharm el Sheikh work program on global goals in reducing the number of climate crises that occur.

The three things above are the basis and principles that need to be contained in every Indonesian government policy that will be implemented. The breakthrough of the Green Environmentally Concept (GEC) is a solution that integrates all the agreements and objectives of the COP-27 agreement in reducing deforestation in Indonesia.

D. CONCLUSION

From the description of the discussion above, the writer can conclude the following:

The implementation of COP-27 is a continuation of COP-26 Glasgow and the Paris Agreement at COP-21, which aims to create an agreement to maintain 1.5 degrees Celsius as an effort to prevent emissions and complete the extraordinary elements of the previous Paris Agreement. What is meant is a collaboration between the commitments and active actions of various Parties in the practice of handling global climate impacts in an integrated and massive manner. The main objectives of COP-27 as a continuation of COP-26 include:

- a. Ensuring global net zero (net zero deforestation) so that the Earth's temperature does not rise more than 1.5 degrees, through efforts to (1) accelerate the elimination of coal use; (2) limit deforestation; (3) accelerate the transition to electric vehicles; and (4) encouraging investment in renewable energy and reducing methane gas emissions.
- b. Adaptation to protect people and natural habitats, so that human civilization and the whole universe are protected and getting better.
- c. Increase funding for developing countries, so that they can get rid of environmental problems and start implementing changes towards clean, renewable, and sustainable energy, for the sake of the survival of their people and the world community.

- d. Implementation of the 2015 Paris Agreement by accelerating the handling of the climate crisis through collaboration between the government and the community, as well as governments between COP countries.

Sweden is a country that is fully committed to climate change mitigation by implementing the country's big plan through its Green Politics and taking concrete steps such as: activating sustainable forest land management, replacing fossil fuels with carbon-free renewable fuels, increasing long-term carbon length in forest land, and meet sufficient sustainable biomass availability. Meanwhile in Indonesia, the government has not been effective in dealing with deforestation by implementing Greenpeace. Indonesia needs to emulate and apply Sweden's big plan model in forestry land management.

In the implementation of COP-27 in Egypt, there were decisions agreed upon by world leaders participating in COP-27 relating to the management of forestry land, including:

- a. Implementation of the Global Climate Observing System;
- b. Funding arrangements for responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage;
- c. National Adaptation Plans

The three principles above are expected to become the basis that needs to be contained in every Indonesian government policy that will be implemented in handling deforestation.

The suggestions that can be given in writing this law are as follows:

- a. It is hoped that the Indonesian government will align national policies with the Glasgow Pact COP-26 to improve the global climate crisis to achieve a global net zero.
- b. It is hoped that the government, in this case, will make a forest activation policy so that it can suppress deforestation in Indonesia. In line with the COP-27 agreement which contains fundamental matters in environmental management.
- c. Indonesia needs to present strategic policies through the policy concept of the Green Concept of Environmentally Friendly Management through policy instruments, whether through laws and regulations, government regulations, presidential regulations to the level of regional regulations. Like Sweden's green politics plan, the Green Environmentally Concept (GEC) is also expected to become a new ethic in environmental management, both from the economic, administrative, and law enforcement aspects to the aspect of restoring and repairing environmental damage.

REFERENCES

JOURNALS

Angelsen, Arild., Jagger, Pamela., Babigumira, Ronnie., Belcher, Brian., Hogarth, Nicholas J., Bauch, Simone., Börner, Jan., Smith-Hall, Carsten., Wunder, Sven. (2014).

- Environmental income and rural livelihoods: a global-comparative analysis. *World Development*, Vol.64, (Suppl 1), pp.12–28. <https://doi.org/10.1016/j.worlddev.2014.03.006>
- Arif, A. (2016). Analisis Yuridis Pengrusakan Hutan (Deforestasi) dan Degradasi Hutan Terhadap Lingkungan. *Jurnal Jurisprudentie*, Vol.3, (No.1), p.33-41. <https://doi.org/10.24252/jurisprudentie.v3i1.3622>
- Aryadi, Mahrus., Satriadi, Trisnu., & Syam'ani. (2018). Kecenderungan Kebakaran Hutan dan Lahan dan Alternatif Pengendalian Berbasis Kemitraan di PT. Inhutani II Kotabaru. *Jurnal Hutan Tropis*, Vol.5,(No.3), p.222. <https://doi.org/10.20527/jht.v5i3.4789>
- Cisneros, Elias., Kis-Katos, Krisztina., & Nuryartono, Nunung. (2021). Palm Oil and the Politics of Deforestation in Indonesia. *Journal of Environmental Economics and Management*, Vol.108. <https://doi.org/10.1016/j.jeem.2021.102453>.
- Gibson, Luke., Lee, Tien Ming., Koh, Lian Pin., Brook, Barry W., Gardner, Toby A., Barlow, Jos., Peres, Carlos A., Bradshaw, Corey J. A., Laurance, William F., Lovejoy, Thomas E., Sodhi, Navjot S., (2011). Primary forests are irreplaceable for sustaining tropical biodiversity. *Nature*, Vol. 478, pp.378–381. <https://doi.org/10.1038/nature10425>.
- Indrarto, Giorgio. Budi., Murharjanti, Prayekti., Khatarina, Josi., Pulungan, Irvan., Ivalerina, Feby., Rahman, Justitia., Prana, Muhar Nala., Resosudarmo, Ida Ayu Prandja., & Muharrom, Efrian. (2013). The Context of REDD+ in Indonesia: Drivers, Agents and Institutions. *Bogor, Indonesia: Center for International Forestry Research (CIFOR) Working Paper 92*. <https://doi.org/10.17528/cifor/003876>
- Johansson, Johanna., & Lidestav, Gun. (2011). Can Voluntary Standards Regulate Forestry?—Assessing the Environmental Impacts of Forest Certification in Sweden. *Forest Policy and Economics*, Vol.13,(No3), pp.191–198. <https://doi.org/10.1016/j.forpol.2010.11.004>
- Lei, Xiyang., Yang, Yao., Alharthi, Majed., Rasul, Farhat., & Raza, Syeh Muhammad Faraz. (2022). Immense Reliance on Natural Resources and Environmental Challenges in G-20 Economies through the Lens of COP-26 Targets. *Resources Policy*, Vol.79. <https://doi.org/10.1016/j.resourpol.2022.103101>.
- Lukmadi, Fiona Khantidevi., & Sitabuana, Tundjung Herning. (2022). COP26: Peran Indonesia dalam Dinamika Climate Action terhadap Poros Penanggulangan Perubahan Iklim di Indonesia. *Prosiding Seri Seminar Nasional (Serina)*, Vol.2,(No.1), pp.257–262. <https://doi.org/10.24912/pserina.v2i1.18538>
- Naime, Julia., Angelsen, Arild., Molina-Garzon, Adriana., D. Carrilho, Caue., Selviana, Vivi.,

- Demarchi, Banriela., E. Duchelle, Amy., Martius, Christopher. (2022). Enforcement and inequality in collective PES to reduce tropical deforestation: Effectiveness, efficiency and equity implications. *Global Environmental Change*. Vol.74. <https://doi.org/10.1016/j.gloenvcha.2022.102520>
- Nakita, Clearestha., & Ulfatun Najicha, Fatma. (2022). Pengaruh Deforestasi dan Upaya Menjaga Kelestarian Hutan di Indonesia, *Jurnal IUS CIVILE (Refleksi Penegakan Hukum dan Keadilan*, Vol.6, (No.1), pp.92-103. <https://doi.org/10.35308/jic.v6i1.4656>
- Oljirra, A. (2019). The Causes, Consequences and Remedies of Deforestation in Ethiopia, *Journal of Degraded and Mining Lands Management*. Vol.6, (No3), pp.1747-1754. DOI:10.15243/jdmlm.2019.063.1747.
- Perbina, Novika., Jeremie S, Billy., & Pasaribu, Rueben FM. (2022). Peran COP26 sebagai Pendukung Pencapaian Tujuan 13 SDGS di Indonesia, dalam Pandangan Greenpeace. *Selodang Mayang: Jurnal Ilmiah Badan Perencanaan Pembangunan Daerah Kabupaten Indragiri Hilir*, Vol.8, (No.1), pp.31–38. <https://doi.org/10.47521/selodangmayang.v8i1.237>
- Preston, Brian J. (2021). The Influence of the Paris Agreement on Climate Litigation: Causation, Corporate Governance and Catalyst (PartII). *Journal of Environmental Law*, Vol.33, (No.2), pp.227-256. <https://doi.org/10.1093/jel/eqaa021>
- Rahanti, Sari Saptuning., Windiani, Reni., & Wahyudi, Fendy Eko. (2016). Indonesia dan Kerja Sama Forest Law Enforcement Governance and Trade–Voluntary Partnership Agreement (FLEGT–VPA) dalam Menangani Perdagangan Kayu Ilegal di Indonesia. *Journal of International Relations*, Vol.2, (No.1), pp. 138–144. <https://doi.org/10.14710/jirud.v2i1.10382>
- Santoso, Ridwan., Ratnawati, Heri., & Riyanti, Dwi. (2022). Klusterisasi Tingkat Deforestasi: Ekologi Kewarganegaraan Indonesia. *Indonesian Journal of Conservation*, Vol.11, (No.1), pp.34–38. <https://doi.org/10.15294/ijc.v11i1.35941>
- Siswoko, Bowo D. (2008). Pembangunan, Deforestasi dan Perubahan Iklim. *Jurnal Manajemen Hutan Tropika*, Vol.14, (No.2), pp.89–96. <https://journal.ipb.ac.id/index.php/jmht/issue/view/456>
- Tacconi, Luca., Rodrigues, Rafael J., & Maryudi, Ahmad. (2019). Law Enforcement and Deforestation: Lessons for Indonesia from Brazil. *Forest Policy and Economics*, Vol.108. <https://doi.org/10.1016/j.forpol.2019.05.029>.

CONFERENCE PAPER

- Yakin, A. (2015). Prospek dan Tantangan Implementasi Pasar Karbon bagi Pengurangan Emisi Deforestasi dan Degradasi Hutan di Kawasan ASEAN. *Paper Disampaikan Pada Seminar*

Nasional "Optimalisasi Integrasi Menuju Komunitas ASEAN 2015. Kerjasama Ditjen Kerja Sama ASEAN, Kemenlu RI dan Universitas Mataram

RESEARCH REPORT

Climate Change. (2021a). *COP26 Special Report on Climate Change and Health: The Health Argument for Climate Action*. Geneva: WHO.

ONLINE SOURCE

Carlgren, F. (2015). Economics Facts. Retrieved from <https://www.economicjadi.se/en/Swedish-economic-history/swedish-economic-history2/Agricultural-toward-Industrial/>

Climate Change. (2021b). COP26 The Glasgow Climate Pact. UN Climate Change Conference UK 2021. Retrieved from <https://ukcop26.wpenginepowered.com/wp-content/uploads/2021/11/COP26-Presidency-Outcomes-The-Climate-Pact.pdf>

Susetyo, Pramono D. (2021). Membandingkan Deforestasi dan Reforestasi Indonesia Retrieved from <https://www.forestdigest.com/detail/1216/berapa-deforestasi-netto-hutan-indonesia>

Gray, A. (2018). Sweden's Forests have Doubled in Size Over the Last 100 Years. Retrieved from <https://www.weforum.org/agenda/2018/12/swedens-forests-have-been-growing-for-100-years/>

Hill, P. (2022). COP26 Presidency Outcomes. UK

2022: Delivering the Glasgow Climate Pact. Retrieved from <https://ukcop26.wpenginepowered.com/wp-content/uploads/2022/11/COP26-Presidency-Outcomes.pdf>

Hirtenstein, A. (2015). Sweden Boosts Renewables to Become First Fossil-Fuel-Free Nation. Retrieved from <https://www.bloomberg.com/news/articles/2015-09-16/sweden-boosts-renewables-to-become-first-fossil-fuel-free-nation>

Kementerian Lingkungan Hidup dan Kehutanan. (2021). Laporan Tentang Deforestasi Di Tanah Papua Pada Areal Pelepasan Kawasan Hutan. (2021). Retrieved from <http://ppid.menlhk.go.id/berita/berita-pemerintah/5818/laporan-tentang-deforestasi-di-tanah-papua-pada-areal-pelepasan-kawasan-hutan>

Kompas. (2022). Negara Hutan Terluas di Dunia. Retrieved from <https://www.kompas.com/skola/read/2022/01/11/172034669/10-negara-dengan-hutan-terluas-di-dunia?page=all>

Perkim.id. (2021). Miris Kondisi Hutan Indonesia, Mari Belajar dari Swedia. Retrieved from <https://perkim.id/energi/miris-kondisi-hutan-indonesia-mari-belajar-dari-swedia/>

Sweden Green Building Council. (2022). Miljöbyggnad iDrift Certifiering av byggnader i drift som ger vinster för miljö, klimat och ägare. Retrieved from <https://www.sgbc.se/certifiering/miljobyggnad/>

BOOK

- Bruhn, Andres., Kjellberg, Andres., & Sandberg, Åke. (2013). *A New World of Work Challenging Swedish Unions. Nordic Lights: Work, Management and Welfare in Scandinavia*. Falun: SNS Förlag, 126–188.
- Cronin, James., Ross, George., & Shoch, James. (2012). *What's Left of the Left? Democrats and Social Democrats in Challenging Times*. *Renewal*, 20(4), 1–424, Duke University Press.
- Forest Resources Assessment Working Paper. (2015). *Terms and Definition*. Rome: Food and Agriculture Organization of The United Nations.
- Hawin, M., Nurhayati, Irna., & Antoni, Veri. (2010). *Analisis Hukum Teks Voluntary Partnership Agreement antara Indonesia dan Eropa*. Jakarta: Forest Governance and Multistakeholder Forestry Programme.
- Johannsen, Vivian Kvist., Nord-Larsen, Thomas., Bentsen, Niclas Scott., & Vesterdal, Lars. (2019). *Danish National Forest Accounting Plan 2021-2030–Resubmission 2019*. Copenhagen: University of Copenhagen.
- Keraf, A. Sonny. (2010). *Etika Lingkungan Hidup*. Jakarta: Kompas Media Nusantara.